

Claims

1. Extrusion die having at least one flexible lip element (1, 2) for discharging extruded material from a gap (S), the flow cross section of which can be modified,

characterized in that

at least one flexible lip element (2) can be moved relative to the other lip element (1) by means of a plurality of jointly actuatable lever elements (8).

2. Extrusion die according to Claim 1, characterized in that the flexible lip element (2) has a tapered flexural region (7.2) between an exit region (6.2) and a die body (4.2), the plurality of jointly actuatable lever elements (8) being situated between the exit region (6.2) and the die body (4.2).

3. Extrusion die according to Claim 1 or 2, characterized in that on one end the plurality of lever elements (8) is mounted in a groove (10) in the exit region (6.2), and on the other end pivotably engages with a slide (11) in the die body (4.2) or a retaining element (13) associated therewith, the slide (11) being supported with respect to the die body (4) and/or the retaining element (13).

4. Extrusion die according to Claim 3, characterized in that the slide (11) can be moved back and forth linearly in an X direction.
5. Extrusion die according to Claim 3 or 4, characterized in that the slide (11) can be moved back and forth in an X direction by means of an actuating element (16).
6. Extrusion die according to Claim 5, characterized in that the actuating element (16) is designed as a manually actuatable drive device, in particular a screw thread or spindle.
7. Extrusion die according to Claim 5, characterized in that the actuating element (16) is designed as a geared element, servomotor, electromechanical drive device, hydraulic cylinder, or the like.
8. Extrusion die according to at least one of Claims 3 through 7, characterized in that the slide (11) is mounted in a recess (12) in the die body (4.2) or a retaining element (13) thereof.
9. Extrusion die according to Claim 8, characterized in that the slide (11) in the recess (12) is supported by a plurality of bearing elements (14, 15), in particular needle roller bearings.
10. Extrusion die according to at least one of Claims 3 through 9, characterized in that the slide (11) can be linearly moved, and under pushing or pulling loads is supported by a plurality of bearing elements (14, 15).

11. Extrusion die according to at least one of Claims 4 through 10, characterized in that a gap height (S_H) of the flow cross section between the respective oppositely situated lip elements (1, 2) may be modified by a linear motion of the slide (11) in the X direction as the result of pivoting of the lever elements (8) about an angle (α).

12. Extrusion die according to at least one of Claims 4 through 11, characterized in that a plurality of lever elements (8) adjacently situated in parallel are pivotably mounted at one end in the flexible lip element (2), and at the other end are mounted in the slide (11) at a uniform distance from one another, the slide element (11) being supported and mounted so as to be linearly movable in the X direction with respect to the die body (4.2) or a retaining element (13).

13. Extrusion die according to at least one of Claims 1 through 12, characterized in that the other flexible lip element (1) has a plurality of actuators (3) running over the entire width in order to adjust the flexible lip element (1) between an exit region (6.1), a tapered region (7.1), and a die body (4.1) over the width as a function of the location, for setting a parallel, uniform gap (S).